ASSISTIVE DEVICES
Information for Patients and Families

What are assistive devices?

Assistive devices are any piece of equipment that you can use to make your daily activities easier to perform. Some examples of assistive devices are wheelchairs, bath benches, as well as talking, hearing and vision aids.

Assistive devices can help you with
- Walking
- Bathing
- Dressing
- Eating
- Speaking with family/friends, etc.

Many devices are commercially available (e.g. bath bench) or homemade by parents/family or health care professionals.

Please note, this information sheet does not show all the available assistive devices. There may be additional devices that could be helpful to you. Further information can be found by asking your health care professional or searching on the Internet by typing key words such as "assistive devices" or "assistive technology".
Which assistive devices can help for walking?

Mobility aids are often prescribed for individuals following a stroke to assist with safety, stability and muscle action when moving (e.g. walking). This equipment can assist the individual achieve greater independence. Mobility aids should be prescribed by a professional in order to meet the individual’s own needs.

There are various mobility aids that are available including:
- Walking canes and walking sticks
- Roller walkers
- Wheelchairs
- Quad walkers

Some research has been done to examine the use of walking aids after a stroke. However, based on the literature reviewed, no recommendations can be made regarding the prescription of a mobility aid.
Which assistive devices can help with bathing?

Studies show that assistive devices often help people to be more independent. Everyone has his or her own bathing/shower habits and different needs. Usually a combination of the following equipment is helpful.

**Grab bars**
Grab bars can be installed in the shower and/or next to the bathtub. Holding on a grab bar will provide support when you
- Stand up and sit down
- Go in and out of the shower or bathtub

The number and the model of grab bars depend on your needs. Some people only need one while other people need more. Grab bars can be installed on the wall or clamped directly on the bathtub. It is very important to install the grab bars firmly and at the right height or place to ensure your safety. Some bars may not be safe for you if you have a weak arm or leg caused by the stroke. **You should talk to your health care professional (for example an occupational therapist) who can help with suggestions on the best way to install the bars.**

![Grab bars](image)
This diagram shows some of the grab bars that are available.

**Bath chair or bath bench**
You can sit on a bath chair or bench during your shower or bath. This helps you save energy because you do not have to stand all the time. Also, sitting in the bath or shower is a good idea if you are having balance difficulties following your stroke.
Transfer bath bench
A transfer bath bench can make it easier for you to move in and out of the bathtub. You sit on the bath bench and lift your legs over the edge of the bathtub. Most people find this way easier than stepping over the edge of the bathtub while standing.

A therapist or nurse can show you the safest way to do this. It is important to practice with someone safely before you try this on your own or with your family.

Anti-slip rubber mats
Anti-slip rubber mats can be placed inside and outside of the shower/bathtub to help prevent falls. These mats provide a surface that is not slippery when it is wet.

Tap turners
Tap turners can make it easier for you to turn taps on and off. They add additional leverage when opening and closing taps.

Bath mitts
If you cannot use both hands it is often difficult to hold soap, lather a washcloth and wring it out. You can put a bar of soap inside a bath mitt so you do not have to hold it.

Long handled brushes and sponges
Long handled brushes and sponges allow you to wash your back or clean your toes without bending down or stretching too much.
Which assistive devices can help with toileting?

Toileting is a task involving many steps:
- entering the bathroom
- getting on/off the toilet
- managing clothing
- cleaning yourself

Each of these steps can represent a challenge for an individual who has had a stroke. The use of assistive devices can help you to perform these tasks more easily and more safely.

Bathroom accessibility
Here are some guidelines to follow if you need to adapt your bathroom because it is not accessible for you:

- Ensure the doorframe is large enough for you to enter the bathroom easily, especially if you have a wheelchair or walker
- Ensure the space available within the bathroom allows you to circulate easily with a walker or a wheelchair (if you have one)
- Ensure the floor is free from unstable carpets that may cause you to slip and other objects to reduce the risks of falling.

If you cannot access the bathroom, there are other solutions available for you.

Urinals
Urinals can be suitable for individuals who find it difficult to go in the bathroom or to transfer to the toilet. Urinals can be used in lying or sitting. They may be convenient for day and/or night use. Two types of urinals are available: male urinals (bottles) and female urinals. Urinals should not be used for bowel movement.

Bed pans
A bed pan can be used if you have difficulty getting up from your bed safely to go to the bathroom. Bed pans are designed to be used for bowel movements or urinating.

Note: Bed pans and urinals should be washed regularly to prevent odors and for cleanliness.
**Bedside commode**
A bedside commode can be used in the bedroom when it is difficult for you to access the bathroom or if you have difficulty reaching the bathroom on time. You can also use a urinal and/or a commode in another room.

It is possible to adjust the height of a commode. It is important that your feet touch the ground (preferably flat) when you sit on the commode. Make sure that the breaks are on when transferring on to your commode. This will ensure safety and reduce the risks of injuries.

**Getting on/off the toilet**
There are also many assistive devices that make it easier to get on/off the toilet.

**Fixed grab bars**
Fixed grab bars are recommended for people who are able to walk into the bathroom and sit on the toilet while using only one hand for support. The grab bar has to be installed on a wall close to the toilet.

The most suitable types of grab bars and the ideal height of grab bars differ from one person to another. **Consult an Occupational Therapist to ensure that the grab bar is installed correctly to suit your individual needs.**

**Fixed toilet frame**
A toilet frame can be fixed to the floor around the toilet. This is suitable when there is no wall close to the toilet and/or the person needs two hands to hold on to something to get on/off the toilet.
Raised toilet seat
A raised toilet seat increases the height of the toilet pan. This makes it easier to sit down on the toilet and stand up. Raised toilet seats of different heights are available commercially. The adequate height should allow the user to place his/her feet flat on the floor while seated on the toilet.

It is important to make sure that the raised toilet seat is securely attached to the toilet each time you use it. Incorrect fitting of the raised toilet seat increase risks of falls. It can also damage the seat if it is replaced incorrectly.

If you live with other people who use the same bathroom, they will need to know how to remove the raised toilet seat.

Toilet frame with seat / Toilet seat with handles
A toilet frame with seat or a toilet seat with handles provide both increased support and increased height. This can be useful for individuals who need a raised toilet seat and a toilet frame to help them move on and off the toilet.

Cleaning yourself when using the toilet

Sheets of toilet paper or wet wipe sheets
If you have difficulty separating the sheets of a roll of toilet paper, consider using tissues, wet wipe sheets or toilet paper that has already been separated, as these options are easier to manipulate with one hand.

Portable bidet/bidet-toilets
If using toilet paper is very hard for you because you have difficulty moving one arm, you could use a bidet. However, these are not recommended if you have difficulty standing safely. Bidets are expensive devices.

Managing clothing
Please refer to the section Which assistive devices can help with dressing? to learn safe techniques to undress/dress the lower body.
Safety Note

The bathroom is the most frequent site of falls for people who have had a stroke.

It is important to identify potential dangers and to correct them.

Try to make sure that you do not hurry to the bathroom or toilet, and avoid rushing these tasks.

Keep the bathroom floor dry at all times to reduce the risks of falls.

Assistive devices should have non-slippery surfaces for safety.
Which assistive devices can help with grooming?

Individuals who have had a stroke may find it difficult to perform daily grooming tasks such as brushing their hair, cutting their nails or brushing their teeth. This information will give you ideas about what assistive devices can make it easier to perform daily grooming tasks.

Cutting nails
- Soak your hands or feet in water before cutting your nails. This softens the nails to make them easier to cut.

- Clippers can be easier to use than scissors. Their design makes them easier to manipulate. Some clippers have been specially-designed to allow you to cut your nails with minimal force and the design of the clippers makes it easier to grasp.

Shaving
- It might be safer and easier for some individuals to use an electric shaver instead of a manual stick razor. Electric shavers decrease the risk of cutting yourself.

- Many individuals find it easier to shave in front of a mirror so that they can see what they are doing.

Brushing teeth
- A tube dispenser can make it easier for you to squeeze toothpaste out of the tube. It also allows you to put toothpaste on your toothbrush while using only one hand.

- While brushing your teeth, you may find that using your strong hand to hold the toothbrush is easier. However, it is sometimes recommended that you still try to use your weak hands in daily task if regaining function is one of your rehabilitation goals.

- If you have dentures, you can use a one-handed technique to soak them. For example, you can open the container and put them in water or in a denture cleansing liquid using only your strong hand.
Brushing, blow-drying and washing hair
- If you have difficulty grasping a hair brush, a padded handle may help. The larger handle makes it easier to grasp.

- A universal cuff can be added to the brush so that you will not have difficulty grasping the brush. This cuff allows you to hold the brush without grasping it.

- A long-handle comb can help you to reach the hair at the back of your head. The long-handle comb allows you to comb your hair without having to lift your arm as high as with a regular comb.

Applying makeup
- Applying makeup can boost your morale. Try to continue wearing makeup as you would normally.

If you feel that these tasks are too difficult to do by yourself, ask the help of your friends or family members for assistance.
Which assistive device can help with dressing?

There are many reasons why people who have had a stroke have problems getting dressed and undressed. Assistive devices can help them to do it by themselves and to help the care provider.

General Rule

Dressing techniques
- Dress the weaker side first and undress it last.

Undressing techniques
- Techniques are always reversed for undressing.

General Advice

- Dressing and undressing should be done in a warm, comfortable environment. This helps you focus on the task.
- Sit on a chair when you are attempting to get dressed and undressed.
- You may need the help of another individual when getting dressed.
- Try to contribute to the task as much as you can.
- Avoid tight fitting clothes.
- Reduce the number of clothes worn.
- Choose clothes made from cotton and natural fibers. This is especially important for someone who spends much of his/her time sitting. These fabrics are also easier to launder.
- Do not rush and rest as needed.
- Speak with a health professional who knows how to make dressing easier after a stroke. This person is usually an occupational therapist.
Putting on a sweater / shirt

Dressing techniques
- Lie the garment on your lap or in front of you on a bed, with the back facing upwards
- Put in your weaker arm first
- Pull the sleeve of the sweater or shirt over your elbow. It will prevent the sleeve from falling
- When the weaker arm is in, put the other arm into the other sleeve
- Use the strong hand to grip the back of the sweater or shirt and pull it over your head.

Undressing techniques
- Remove clothing from your stronger arm first and then from the weaker arm.

Putting on Pants

Dressing techniques
- Dress the weaker leg first
- Ensure that the leg is in the garment as far as possible
- Then put the strong leg in
- Bring your pants up to mid-thigh and stand once to pull both garments up

Undressing techniques
- Stand only to pull down all the lower garments
- Sit to remove them from your legs
- Avoid standing in socks or barefoot to prevent falls when bringing up pants.

Note: Extra care is required for people who have difficulty balancing when standing. A therapist can show you how to dress without standing up if this is safer for you. For example, if you cannot stand or if you have a lot of difficulty, put pants on while lying on the bed.
Dressing aids

- Front-fastening bras are available commercially. Alternatively, fasten your bra at the front of your body around your waist, then turn it around and put your arms in.

- If you have difficulty putting a necktie do not loosen the tie completely after wearing it – this will enable you to so that you can re-use the knot by just slipping it over your head with one hand. Alternatively, you can purchase a clip that is put on the tie, which saves you from having to tie a knot.

- Long-handed reachers are useful if you have difficulty reaching clothes that are placed too high, too low or too far from you. Long-handed reachers are also useful for individuals who use a wheelchair, as they can help you take clothes off the closet or pick up objects that are on the floor.

- A button hook can help you with buttoning and unbuttoning.

- If you have difficulty buttoning, you can use Velcro fastening. Velcro is available at local fabric stores.

- A dressing stick may be useful if you have difficulty getting your leg into the pant.

- A sock aid can help individuals who have difficulty bending forward to put socks on, or difficulty holding socks with one hand.

- Elastic shoelaces are useful for individuals who find it difficult to lace and tie their shoes.

- You may benefit from using a footstool if you have difficulty bending and reaching your lower legs and feet. The footstool allows you to raise your feet so that they are easier to reach.

- A long-handled shoe horn is useful if you have difficulty bending down to put on your shoes.
Which assistive devices can help with preparing meals?

Individuals who have had a stroke may find it difficult to prepare meals. This next section will give you ideas about what assistive devices can be used to make meal preparation easier.

Transporting Objects

- A kitchen trolley can be used to transport objects from the kitchen to the dining room table. This is a good product to use to make it safer to carry heavy objects.

  If you choose to use a trolley on wheels, remember that it is not as stable as your walking aid. Make sure that you do not lean on it.

- Home-made or specialized bags can be attached to your kitchen trolley or walking aid and are useful for carrying items.

  If you choose to attach bags to your walking aid, make sure that it is not too heavy as carrying a lot of weight in your bag could make your walking aid tip over.

Utensils

Adapted utensils can be useful if you find that you are having more difficulty using your hands after the stroke.

- Try combined utensils such as a spoon combined with a fork or a fork with a serrated edge.

- A cutting board with spikes to stabilize the food while cutting.

- A rocker knife can help you to cut your food with one hand. The rocking motion of the knife makes it easier to cut without stabilizing the food with the other hand.
Making toast
- A buttering board makes it easier to spread butter on toast. The raised edges will keep the bread in place while you are buttering.

Making hot beverages
- To maximize safety, use a kettle that turns itself off automatically.
- Use a kettle tipper, which makes it easier to pour hot liquid into a cup with one hand. Initially, pouring hot liquid with one hand can be difficult. It is recommended that you practice using the kettle tipper with a kettle that is filled with cold water before using it with hot liquids.

Other assistive devices
Many other assistive devices are available to help you prepare meals.
- Use a bowl holder to transfer food from one bowl to another.
- A grater with suction feet if you want to prepare cheese with one hand.
- If you get tired while preparing meals, a perching stool with a back support can help you, since it allows you to sit when you are tired. Using a stool with back support makes preparing meals safer and requires less energy.
- A can opener that is mounted on the wall makes it easier to open a can with one hand.
Which assistive devices can help with eating / feeding?

First, it is important for you to maintain a good position when eating. Sit in a chair that provides good support. If your trunk is weak and you need extra support, you can use pillows, an arm trough for your weaker arm, or a lap board. Good positioning will make it easier for you to swallow your food safely.

**Adapted cutlery**

Individuals who have had a stroke may find it difficult to use cutlery, particularly if one arm is weak. Adapted utensils enable the use of one hand for mealtimes and make it easier to grasp cutlery.

- Universal cuffs are used to hold utensils in place, making it easier for some individuals who have difficulty grasping utensils. It is possible to make the cuff tighter around your hand so that the utensil will not move.

- Utensils with built-in or longer handles are easier to grasp if your hand is weak.

- Combined utensils (fork and knife, spoon and fork) have been created for people who have one strong hand so that they do not need to switch from one utensil to the other, or use two hands to eat.

- Rocking knives – the rocking action prevents you from having to hold the food in place with the other hand, allowing you to cut your food with only one hand.

**Eating from the plate**

- Adhesive placemats hold the plate in place. People who have had a stroke often use only one hand when eating. Because they do not have the other hand to hold things down, the plate moves during cutting or eating.

- Plate guards enable you to use utensils without pushing food off of your plate. This is helpful for people who cannot use their second hand to hold the knife.
Drinking from a glass or cup
The muscles that you use for drinking and swallowing may be weaker since your stroke. This can cause you to have difficulty drinking.

- Add an attachable handle to a glass or soft drink can. These can help you to hold a glass or a can without having to grasp it. They can be attached to any glass or can.

- Cups with T-shaped handles are easy to hold if you have difficulty gripping, since you can simply put your fingers around the handle without closing your hand around it.

- Consider drinking from a straw if you find that liquid is leaking out of your mouth when you drink.

- A straw-holder may also make drinking easier for you as the straw is fixed into the glass and cannot fall out or move.

You should talk to your health professional if you are having difficulty drinking or swallowing. There are assessments that he or she will do to see if you are having problems with the muscles that are used for swallowing.
Which assistive devices can help with using a computer?

Individuals who have had a stroke may find it difficult to use a computer. There are numerous assistive devices available that can be used for this task.

First, it is important that you consult an occupational therapist if you think that some devices would help you to use your computer more easily. Your occupational therapist will evaluate your physical and mental capacities as well as your environment, needs, and goals. Based on this evaluation, devices will be chosen that best fit your individual needs.

Accessibility features on your computer's operating system (Windows)

These features are free and are already installed on your computer if you are using more recent versions of your operating system. Here are the main ones:

- **Sticky keys** were designed for people who have difficulty holding down more than one key at a time (e.g. if you can only use one hand to type). Once this function is activated pressing one key only can activate the SHIFT, CTRL, ALT, or Windows logo keys.

- **Filter keys** are helpful if you have difficulty controlling the movements of your hands and fingers. It adjusts the keyboard response so that inadvertently repeated keystrokes are ignored. If you activate it, brief or repeated keystrokes will not be taken into consideration. You can also slow the rate at which a key repeats when you hold it down.

- **Toggle keys** - when this feature is turned on, you will hear tones when you press on the locking keys (CAPS LOCK, NUM LOCK, and SCROLL LOCK). A high sound is played when the keys are switched on and a low sound is played when they are switched off. This feature is helpful for individuals with visual impairments.

- **An on-screen keyboard** may be helpful if you find it difficult to type on a regular keyboard. It is a virtual keyboard displayed on the computer screen that allows you to type by using a pointing device.

- **A magnifier** can be used if you have difficulty reading small characters because of decreased vision.
**Assistive Devices**

- **A narrator** can read out loud what is displayed on the computer screen. It is designed to work with many programs including Notepad, WordPad, Control Panel programs, Internet Explorer, the Windows desktop and some parts of Windows Setup.

- Click on [www.microsoft.com](http://www.microsoft.com) for more information on free accessibility features available to users.

Speak to your rehabilitation therapist for additional programs and technologies for using the computer.

**Ergonomic equipment**

Ergonomic equipment includes accessories that help you maintain good posture and to be more comfortable while using a computer.

- **A foot rest** can be useful if your feet are not in contact with the floor when using your computer. This will help you to maintain a better seating position when working at your computer.

- If you often use your computer it might be important to buy a quality chair with arm rests, a back rest and adjustable height. It is recommended that you get a chair without wheels to decrease the risk of falls.

- Many other types of ergonomic supports are available on the market. You can ask your health care professional or search on the Internet for more information.

**Keyboard**

- A contracted keyboard can help you if your weaker arm has limited movement. This keyboard is small enough to be used easily with only one hand.

- There are many different on-screen keyboards available that can enable you to type more efficiently. They consist of virtual representations of keyboards displayed on the computer screen. They can also be useful if you are not able to use a regular mouse, since they can be used with other pointing devices, such as a joystick.

- Many other types of keyboards are available on the market. You can ask your
health care professional or search on the Internet for more information.

Mouse and other pointing devices

- If the stroke has caused weakness in your dominant hand, you can use the computer mouse with your non-dominant hand. Place the mouse on the other side of the keyboard. Make sure you change the mouse buttons by going into the control panel of your computer to change the mouse options.

- Other types of pointing devices such as trackballs, joysticks, and head pointers are available commercially. You can ask your health care professional or search on the Internet for more information.
Which assistive devices can help with communication?

Individuals who have had a stroke may find it difficult to communicate, particularly if their symptoms include aphasia (i.e. partial or complete loss of the ability to speak, or to understand spoken language). If this is the case for you, assistive devices for communication can help you to communicate and interact socially.

First, it is important that you consult an expert, such as a Speech-Language Pathologist or an Occupational Therapist, in order to choose the right device for you. Your therapist will evaluate your physical and mental capacities, as well as your environment, needs, and goals. Based on this evaluation, devices will be chosen that best fit your individual needs.

There are two types of assistive devices that can help you communicate:

- **Alternative communication devices** are used for people who cannot speak. They utilize other ways of communication such as gestures and writing.

- **Augmentative communication devices** are used for people who are able to speak, but with some limitations in this type of communication. These devices utilize other ways to communicate to support speech.

Some of the many techniques and assistive devices that help with communication are:

- **Gestures**: You can use gestures and simple signing to make yourself more easily understood by your family members and friends.

- **Communication boards and books**: These may contain pictures, drawings, letters, words, sentences, and/or symbols that represent objects. You can communicate your needs to others by pointing to a specific symbol.

- **Electronic devices**: These produce speech when you activate the device, either by using a keyboard, switches, or other methods.

There may be additional devices that could be helpful to you. Further information can be found by asking your health care professional.
Which assistive devices can help with leisure activities?

Cards
- Card shuffling is easier with an automatic card shuffler.
- A cardholder is a useful way of playing cards with only one hand. It allows you to rest your hand when it tires.

Gardening
- Some people may prefer to sit on a stool instead of kneeling.
- A garden hopper enables you to push with your feet in order to move around.
- A specially designed garden tool may be helpful if your arm is weaker after your stroke. For example, the extra support offered by an arm cuff on garden tools makes gardening less strenuous. Look for a handle that is comfortable and easy for you to grasp.

Embroidery
- An embroidery hood holds the fabric and twists to a convenient angle. This enables you to continue to embroider despite limited use of one hand.

Fishing
- A fishing rod holder straps the fishing rod to your body so you can troll and cast with one strong arm. The holder can also be used to attach the fishing rod to a wheelchair.

Golf
- Reduce bending by using a tee tool to tee the golf ball or a claw to pick it up.
- Specialized golf gloves attach to the golf club using Velcro fastening. This allows a controlled swing despite a weakened grip.
Who can teach me how to use assistive devices?

Different health care professionals focus on assistive devices within their field:

- **Hearing specialists** (audiologists) for hearing aids such as sound magnifiers.
- **Low vision specialists** for visual aids such as glasses, magnifiers, etc.
- **Speech-language pathologists** for communication aids.
- **Physical therapists** for mobility aids such as canes and walkers.
- **Occupational therapists** for wheelchair fittings, devices to help things you do everyday activities such as feeding, dressing, toileting, grooming, cooking, and adaptations to help you continue with your hobbies.

You can ask any health care professional with whom you are in contact and they will refer you to the correct health professional.

Where can I find assistive devices?

Before you decide to buy an assistive device (especially an expensive one) it is usually better to ask the advice of a health professional. They can guide you in choosing an appropriate model, making sure the device will be useful to you, and most importantly, minimizing risk of injury.

You might be able to buy some simple assistive devices such as dressing aids in the hospital or rehabilitation center where you are receiving treatment. Usually, the occupational therapist will have a list of companies supplying assistive devices in your area.

There are many private companies who sell different kinds of assistive devices. In addition to your healthcare provider, the Internet is a valuable source of information.

How much do assistive devices cost?

It is difficult to put a price range on assistive devices because there are many different kinds, and the cost varies from country to country. A long-handle sponge might cost less than 15$, while a powered wheelchair can cost more than 3000$ Canadian.
Do my insurance company or other governmental programs cover them?

If you have private insurance, contact your insurance company to find out your personal coverage information as different plans vary. Governmental programs also provide some coverage on assistive devices. Ask your healthcare professional for details. Note: In Canada, programs vary by province.

Which assistive devices can help with going back to work?

It is possible to go back to work after you have had your stroke. Depending on the type of work you want to do, there are many assistive devices that may help you. Assistive devices for driving, walking and communication can help make the transition back to work more successful. Your healthcare provider can assess your needs and can help you choose the proper assistive devices.

Information on this web site is provided for informational purposes only and is not a substitute for professional medical advice. If you have or suspect you have a medical problem, promptly contact your professional healthcare provider.